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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/748,165
Filing Date: December 31, 2003
Appellant(s): HAYASHI, SADAFUKU

MAILED

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Technology Center 2600

Peter F. McGee, Esq.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 14, 2006 appealing from the Office action mailed March 23, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,701,155 to Sarkkinen et al. in view of UK Patent Application No. 2371179 A Ericsson.

Sarkkinen teaches all the elements of independent claim 28, including a mobile communication system (Figure 1) for delivering identical data from a data source to a plurality of radio terminals (column 1, lines 55 to 60), said mobile communication system comprising a plurality of radio network controllers (Figure 1, elements 30 and 35), each controller including circuitry for counting the number of radio terminals connected to such controller to receive the data from the data source (it would have been obvious to one of ordinary skill in the art at the time the invention was made for the RNCs to count the number of UEs because it would allow the RNCs to keep track of the number of UEs in a given cell and thus calculate various network parameters, such as loading; and see, column 5, lines 33 to 35 and column 6, lines 23 to 26, which teaches a UE entering into a new RNC cell and the RNC updating the SGSN) and circuitry for controlling delivery of

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the data within an associated cell (Figures 6 and 7 and corresponding descriptions in columns 7 to 8), wherein:

when a radio terminal within a first cell is connected to the controller associated with the first cell, upon movement of the radio terminal from the first cell to a second cell, the radio terminal establishes connection to the controller associated with the second cell (the Examiner takes Official Notice that this is soft handoff and is well known in the art and is also shown in Ericsson);

in response to connection of the radio terminal to the controller associated with the second cell, the count of radio terminals connected to the controller associated with the first cell is decremented and the count of radio terminals connected to the controller associated with the second cell is incremented;

However, Sarkkinen does not explicitly teach the above recitation. But, Sarkkinen does teach a RNC sending an indication to the SGSN when a new UE moves into the RNC's cell. See, column 5, lines 33 to 35 and column 6, lines 23 to 26. Also, Ericsson teaches a first RNC updating a second RNC when a user moves from the second RNC to the first RNC. Ericsson, page 4, lines 21 to 29. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the teaching of Sarkkinen, which includes a system, which multicasts to users via RNCs with the method of Ericsson, by having the RNCs themselves update each other when mobile users move between RNCs by sending update messages directly between RNCs because this would lessen the burden on the SGSN taught in Sarkkinen. In addition, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to understand that while the RNCs were updating each other, they would also keep count of the UEs in order to better keep track of various network parameters, such as loading.

the number of radio terminals connected to the controller associated with the second cell is compared with a predetermined number (implicit based on the determination of whether the number of UEs is "very low" (column 7, line 52));

if the number of radio terminals connected to the controller associated with the second cell is less than the predetermined number, a dedicated channel is set between the radio terminal and the control associated with the second cell (column 7, lines 51 to 54);

if the number of radio terminals connected to the controller associated with the second cell is equal to or greater than the predetermined number, a common channel is set between the radio terminal and the control associated with the second cell (Id., if the number of terminals is not "very low" then a multicast is established, see, column 7, lines 48 to 51); and

the data is delivered from the controller associated with the second cell to the radio terminal over the set channel (column 7, lines 59 to 67).

The rejection of claim 28 is hereby incorporated. Sarkkinen in view of Ericsson teaches all the steps of independent claim 29, including a method of operating a mobile communication system (Figure 1) to deliver identical data from a data source to a plurality of radio terminals (column 1, lines 55 to 60), the mobile communication system

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including a plurality of radio network controllers (Figure 1, elements 30 and 35), each controller maintaining a count of the number of radio terminals connected to such controller to receive the data from the data source (see above) and controlling delivery of the data within an associated cell (Figures 6 and 7 and corresponding descriptions in columns 7 to 8), said method comprising:

- connecting a radio terminal within a first cell to the controller associated with the first cell (the Examiner takes Official Notice that this is soft handoff and is well known in the art and is also shown in Ericsson);

- upon movement of the radio terminal from the first cell to a second cell, connecting the radio terminal to the controller associated with the second cell (Id.);

- decrementing the count of radio terminals connected to the controller associated with the first cell (see above);

- incrementing the count of radio terminals connected to the controller associated with the second cell (Id.);

- comparing the number of radio terminals connected to the controller associated with the second cell with a predetermined number (implicit based on the determination of whether the number of UEs is "very low" (column 7, line 52));

- if the number of radio terminals connected to the controller associated with the second cell is less than the predetermined number, setting a dedicated channel between the radio terminal and the control associated with the second cell (column 7, lines 51 to 54);

if the number of radio terminals connected to the controller associated with the second cell is equal to or greater than the predetermined number, setting a common channel between the radio terminal and the control associated with the second cell (Id., if the number of terminals is not “very low” then a multicast is established, see, column 7, lines 48 to 51); and

delivering the data from the controller associated with the second cell to the radio terminal over the set channel (column 7, lines 59 to 67).

The rejections of claims 28 and 29 are hereby incorporated. Sarkkinen in view of Ericsson teaches all the steps of independent claim 30, including a machine readable medium having stored thereon a program for causing a computer to execute an operation control method to cause a mobile communication system (see above) to deliver identical data from a data source to a plurality of radio terminals (see above), the mobile communication system including a plurality of radio network controllers (see above), each controller maintaining a count of the number of radio terminals connected to such controller to receive the data from the data source (see above) and controlling delivery of the data within an associated cell (see above), said method comprising:

connecting a radio terminal within a first cell to the controller associated with the first cell (see above);

upon movement of the radio terminal from the first cell to a second cell, connecting the radio terminal to the controller associated with the second cell (see above);

decrementing the count of radio terminals connected to the controller associated with the first cell (see above);

incrementing the count of radio terminals connected to the controller associated with the second cell (see above);

comparing the number of radio terminals connected to the controller associated with the second cell with a predetermined number (see above);

if the number of radio terminals connected to the controller associated with the second cell is less than the predetermined number, setting a dedicated channel between the radio terminal and the control associated with the second cell (see above);

if the number of radio terminals connected to the controller associated with the second cell is equal to or greater than the predetermined number, setting a common channel between the radio terminal and the control associated with the second cell (see above); and

delivering the data from the controller associated with the second cell to the radio terminal over the set channel (see above).

Sarkkinen in view of Ericsson teaches all the elements/steps of claims 2 and 31, including wherein the movement of the radio terminal between radio network controllers is movement during a period before data reception and after said radio terminal has joined the service. See, Sarkkinen, column 6, lines 1 to 35 and column 7, lines 48 to 67.

Sarkkinen in view of Ericsson teaches all the elements/steps of claims 3 and 32, including wherein the movement of the radio terminal is movement during an idle mode or a standby state. See, *Id.*

(10) Response to Argument

Appellant argues that there is no motivation or suggestion to combine the cited references (Sarkkinen and Ericsson) nor do the cited references teach or suggest all the claim limitations. The Examiner respectfully disagrees.

Appellant begins with a review of Sarkkinen, stating that the reference does not teach that the RNCs include counters¹, which count the UEs, but does teach that the SGSN counts the number of UEs in a given location. See Appellant's brief, pages 10 to 11.

The Examiner agrees with the above interpretation of Sarkkinen. But, as Appellant noted, in column 5, lines 33 to 35 and column 6, lines 23 to 26 of Sarkkinen, there is a teaching that the RNCs send update information to the SGSN when a UE enters a new cell or if the RNC notices a change in the multicast information for a UE. The Examiner respectfully submits that this teaching suggests that the RNCs are *also* counting the UEs, *which the current claims do not exclude*.

In addition, Ericsson is cited as teaching two RNCs updating each other directly when a UE moves between each (Ericsson, page 4, lines 21 to 29). The Examiner respectfully submits that this teaches the RNCs keeping count of the UEs in their respective cells. Furthermore, as taught on page 4, lines 18 to 20 of Ericsson, the direct

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communication between the RNCs, speeds up cell updates and reduces the volume of signaling traffic. In view of this it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the RNCs of Ericsson in the system of Sarkkinen so the RNCs of Sarkkinen would have kept count (i.e. incrementing and decrementing accordingly) of the UEs as they moved in and out of the respective RNC's cells and this information could then be forwarded to the SGSN.

As to the shifting of the burden addressed by the Appellant and suggested by one of the motivational statements in the above rejection, it would appear this has caused some confusion, for which the Examiner apologizes. As can be seen from the rejection, two motivational statements were given. Upon review of the claims and Appellants arguments, it has become clear that the claims are not limited and do not require that the counting take place solely in the RNCs. Therefore, while Appellant has accurately characterized Sarkkinen with respect to the SGSN counting the UE terminals, the Examiner submits that the rejection is proper as further clarified by the arguments presented here because as Ericsson teaches, RNCs are known to update each other as UEs move back and forth and to keep count, and therefore as further suggested by Sarkkinen in columns 5 and 6, the RNCs would also be keeping count as they sent the UE information to the SGSN.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

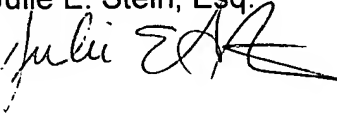
¹ The Examiner notes that the claims do not recite "counter," however they do recite "circuitry for

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

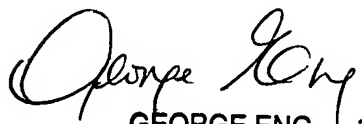
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counting," which the Examiner respectfully submits is the same as a counter.